

REMARKS/DISCUSSION OF ISSUES

Claims 1-20 are pending in the application.

Applicant acknowledges the indication that claims 3-8, 11-16 and 20 define patentable subject matter and would be allowable if rewritten in independent form including all features of their respective base claims, and any intervening claims.

Reexamination and reconsideration are respectfully requested in view of the following Remarks.

35 U.S.C. § 103

The Office Action rejects claims 1-2, 9-10 and 17 under 35 U.S.C. § 103 over Giorgianni et al. U.S. Patent 5,609,978 ("Giorgianni") in view Meynants et al. U.S. Patent 6,833,868 ("Meynants"), and claims 18 and 19 under 35 U.S.C. § 103 over Giorgianni in view of Meynants and further in view of Guimaraes et al. U.S. Patent Publication 2003/0156214 ("Guimaraes").

Applicant respectfully traverses those rejections for at least the following reasons.

Claim 1

Among other things, the method of claim 1 includes constructing a criteria function describing an error between desired color matching functions and a spectral response of an RGB filter set.

The Office Action states in one place that Giorgianni discloses the RGB filter set at col. 7, lines 55-60, and discloses determining RGB filter set response characteristics at col. 31, lines 46-51.

Applicant respectfully disagrees.

Giorgianni pertains to photographic film. See Abstract, Table 1, claims 1-19, etc. Giorgianni aims to provide a photographic film with improved colorimetric accuracy.

Giorgianni does not pertain to RGB filters. Giorgianni does not disclose any RGB filters. Giorgianni does not determine RGB filter set response characteristics.

The Office Action also mentions a "MacAdam Filter" and states that such a

"filter" "could be read as the RGB filter.

However, the cited text at col. 7, lines 55-60 discloses equations that relate transformed exposure signals of photographic elements to CIELAB coordinates. L_{PEi} , a_{PEi} , and b_{PEi} are coordinates of exposure signals produced by the photographic element in response to a particular test color, i , after the signals are transformed by an exposure space matrix M . There is no RGB filter set disclosed anywhere in col. 7, lines 55-60.

Furthermore, the equation at the top of col. 8 calculates the error between an actual test color, and the transformed exposure signal produced by the photographic element for the test color, in terms of CIELAB coordinates. It certainly does not calculate a criteria function describing an error between desired color matching functions and a spectral response of an RGB filter set.

Moreover, Col. 31, lines 46-51 disclose using a photographic element in combination with an optical filter such that the combination produces a desired set of spectral sensitivities.

The cited text makes no mention of any RGB filter set. Indeed, it is difficult to fathom how an RGB filter set could be physically deployed with the disclosed photographic element to produce a useful image. The fact that an RGB filter set is not contemplated by Giorgianni is easily seen from inspecting the equations at the bottom of column 31 which clearly show that the exact same "optical filter" function sensitivity curve would be multiplied by each of the red, green, and blue sensitivity curves of the photographic element itself. Furthermore, the detailed discussion of suitable filters by Giorgianni at col. 32, lines 9-38 makes not mention or suggestion of any RGB filter set, and indeed contemplates the use of optical filters that pass all colors of the spectrum to the various emulsions of the photographic element.

Furthermore, the cited text also certainly does not disclose determining any RGB filter set response characteristics based on a criteria function. The text merely states that the effective spectral sensitivity curves of the combination of optical filter and photographic element can be combined or measured, and then these effective sensitivity curves can be used to calculate an average color error with respect to CIE

1976, and a noise gain factor.

So, no combination of Giorgianni and Meynants could produce the method of claim 1.

Finally, Applicant respectfully traverses he proposed combination of Giorgianni and Meynants. The reasons stated for the proposed combination make no sense. Giorgianni is concerned with providing a photographic film with improved colorimetric accuracy. It does not disclose or pertain to any "CMOS based color imaging device," and so nothing in Meynants could allow anything in Giorgianni to be "implementable in a sufficiently small circuit" or constructed as "a single chip CMOS based color imaging device." Not only is there no apparent reason for the proposed "combination," but Applicant submits that such a "combination" is not even possible since Meynants discloses a method of correcting color values for RGB pixels in a solid state imaging device, while Giorgianni does not have any solid state imaging device with pixels.

Accordingly, for at least these reasons, Applicant respectfully submits that claim 1 is patentable over any combination of Giorgianni and Meynants.

Claim 2

Claim 2 depends from claim 1 and is deemed patentable for at least the reasons set forth above with respect to claim 1.

Claim 9

Claim 9 is directed to a computer readable medium storing a computer program comprising computer readable code for executing the method of claim 1.

Accordingly, claim 9 is deemed patentable over any combination of Giorgianni and Meynants for at least the reasons set forth above with respect to claim 1.

Claim 10

Claim 10 depends from claim 9 and is deemed patentable for at least the reasons set forth above with respect to claim 9, and also for similar reasons to those set forth above with respect to claim 2.

Claim 17

Among other things, the system of claim 17 includes means for determining

RGB filter set response characteristics based on the criteria function and means for constructing a criteria function describing an error between desired color matching functions and a spectral response of an RGB filter set, and means for determining RGB filter set response characteristics based on the criteria function.

As explained above with respect to claim 1, the cited art does not disclose these features.

Accordingly, for at least these reasons, Applicant respectfully submits that claim 17 is patentable over any combination of Giorgianni and Meynants.

Claims 18 and 19

Claims 18 and 19 depend from claim 17.

Applicant respectfully submits that Guimaraes does not remedy the shortcomings of Giorgianni & Meynants as set forth above with respect to claim 17, so claims 18-19 are deemed patentable for at least the same reasons as claim 17.

CONCLUSION

In view of the foregoing explanations, Applicant respectfully requests that the Examiner reconsider and reexamine the present application, allow claims 1-20 and pass the application to issue. In the event that there are any outstanding matters remaining in the present application, the Examiner is invited to contact Kenneth D. Springer (Reg. No. 39,843) at (571) 283.0720 to discuss these matters.

Respectfully submitted,

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